## BRUHAT BANGALORE MAHANAGARA PALIKE

**Name of Work: Improvements and Asphalting to roads at Besthara bheedhi in chowdeshwari ward no -02 of yelahanka sub division**

| Sl No | Description of work | Unit | No | Length m | Breadth m | Depth m | Quantity | Rate in Rs | Amount in Rs |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Removing and refixing stone slabs of drains and pointing in CM (1:3) (P.No-27,I No-5.33) | | | | | | | | |
| | **For Drain Desilt** | Sqm | | | | | | | |
| | **Besthara Beedhi** | | | | | | | | |
| | | | 2 | 60.00 | 0.75 | | 90.00 | | |
| | | | 2 | 113.00 | 0.75 | | 169.50 | | |
| | | | 2 | 43.00 | 0.75 | | 64.50 | | |
| | | | | | | | **324.00** | | |
| | Deduct for missing/damaged | | | | | | 64.80 | | |
| | | | | | | | **259.20** | 111.30 | **28848.96** |
| | Basic Rate Rs.= | 105.00 | | | | | | | |
| | Add 6% A.W Rs. = | 6.30 | | | | | | | |
| | **Total Rate Rs. =** | **111.30** | | | | | | | |
| 2 | KSRRB 300 - Excavation for road, drains and similar works KSRRB 300-1. Earthwork excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5 m, excavated surface leveled and sides neatly dressed, the disposed earth to be leveled neatly after breaking of clods complete as per specifications. MORTH / Chapter 3 (P.No-143, I.No-19.1) | | | | | | | | |
| | | Cum | | | | | | | |
| | **RCC Drain** | | | | | | | | |
| | **5th cross** | | 1 | 100.00 | 1.10 | 1.00 | 110.00 | | |
| | For RCC Culvert | | 2 | 5.00 | 1.40 | 1.00 | 14.00 | | |
| | **For Drain Desilt** | | | | | | | | |
| | **Besthara Beedhi** | | | | | | | | |
| | | | 2 | 60.00 | 0.45 | 0.40 | 21.60 | | |
| | | | 2 | 113.00 | 0.45 | 0.40 | 40.68 | | |
| | | | 2 | 43.00 | 0.45 | 0.40 | 15.48 | | |
| | | | | | | | **201.76** | 215.28 | **43434.89** |
| | Basic Rate Rs.= | 130.00 | | | | | | | |
| | Add 6% A.W Rs. = | 7.80 | | | | | | | |
| | **Sub Total =** | 137.80 | | | | | | | |
| | 8Km Lead, Loading and Unloading =(2*1.28*8)+57 | 77.48 | | | | | | | |
| | **Total Rate Rs. =** | **215.28** | | | | | | | |
| 3 | KSRRB M2100-10. Providing and laying Plain cement concrete of mix 1:3:6 with OPC @ 220kgs, with crushed 40mm and down size graded granite metal coarse aggregates @0.89cum and fine aggregates @ 0.46cum, in foundation mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days including cost of all materials, labour, HOM curing, form works, scaffolding and centering complete as per specifications. (P.No-222,I No-27.18) | | | | | | | | |
| | **RCC Drain** | Cum | | | | | | | |
| | **5th cross** | | 1 | 100.00 | 1.10 | 0.15 | 16.50 | | |
| | For RCC Culvert | | 2 | 5.00 | 1.40 | 0.15 | 2.10 | | |
| | **For KERB Stone** | | | | | | | | |
| | Masidi Road upto Railway station | | 1 | 300.00 | 0.20 | 0.10 | 6.00 | | |
| | | | | | | | **24.60** | 5421.90 | **133378.74** |
| | Basic Rate Rs.= | 5115.00 | | | | | | | |
| | Add 6% A.W Rs. = | 306.90 | | | | | | | |
| | **Total Rate Rs. =** | **5421.90** | | | | | | | |
| 4 | Providing and laying plain/reinforced cement concrete for side drains using M20 nominal mix concrete with OPC at 300 kgs. With 20mm and sown size granite metal course aggregates at 0.69 cum and fine aggregates at 0.43 cum machine mixed, well compcted for walls and bottom including centring shuttering cost of material HOM of machinary curing etc., complete execluding cost of steel as per MORTH specification no. 1500, 1700, 2200 including cost of material labour HOM complete as per specification. (P.No.271, I.No.37.59.2 of PW, P&IWTD S.R 2018-19) | | | | | | | | |

| Sl No | Description of work | Unit | No | Length m | Breadth m | Depth m | Quantity | Rate in Rs | Amount in Rs |
|---|---|---|---|---|---|---|---|---|---|
| | For RCC Drain | Cum | | | | | | | |
| | Bottom slab | | | | | | | | |
| | 5th cross | | 1 | 100.00 | 0.90 | 0.15 | 13.50 | | |
| | side walls | | | | | | | | |
| | 5th cross | | 2 | 100.00 | 0.15 | 0.60 | 18.00 | | |
| | | | | | | | 31.50 | | |
| | For RCC Culvert | | | | | | | | |
| | Raft | | 2 | 5.00 | 1.20 | 0.20 | 2.40 | | |
| | side walls | | 4 | 5.00 | 0.20 | 0.60 | 2.40 | | |
| | | | | | | | 4.80 | | |
| | | | | | Net Qty. | | 36.30 | 7070.20 | 256648.26 |
| | Basic Rate Rs.= | 6670.00 | | | | | | | |
| | Add 6% A.W Rs. = | 400.20 | | | | | | | |
| | **Total Rate Rs. =** | **7070.20** | | | | | | | |
| 5 | KSRRB - M2300-14: Providing TMT steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, palcing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining memebrs wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications.MORTH Specification No. 1600 & 2200 for TMT bars Fe 500. (P.No.239, I.No.29.29.2 of PW, P&IWTD S.R 2018-19) | | | | | | | | |
| | Considering steel For Drain @ 60 kg / cum | Tonne | | 31.50 | 0.060 | -- | 1.89 | | |
| | Considering steel For Culvert @ 90 kg / cum | | | 4.80 | 0.090 | -- | 0.43 | | |
| | | | | | | | 2.32 | 73992.24 | 171809.98 |
| | Basic Rate Rs.= | 69804.00 | | | | | | | |
| | Add 6% A.W Rs. = | 4188.24 | | | | | | | |
| | **Total Rate Rs. =** | **73992.24** | | | | | | | |
| 6 | Providing and fixing RCC precast cover slab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate) | | | | | | | | |
| | For drain cover slab | Sqm | | | | | | | |
| | 5th cross | | 1 | 100.00 | 0.90 | -- | 90.00 | | |
| | missing/damaged from item no.01 | | | | | | 64.80 | | |
| | | | | | | | 154.80 | 2337.00 | 361767.60 |
| 7 | Providing and fixing RCC precast cover slab of 250mm thick made out of CC 1:2:4 and jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate) | | | | | | | | |
| | For Culvert Slabs | Sqm | 2 | 5.00 | 1.20 | -- | 12.00 | 5418.00 | 65016.00 |
| 8 | Providing and fixing pre cast solid cement concrete kerb stones made out of CC 1:2:4 with top and bottom width 114 and 165 mm respectively, 400mm high and 450mm in length finished with CM 1:3 plastering and finishing cutting including formwork, curing, including cost of materials, labour charges of machinery, loading and unloading, lead and lift, transportation ete.,complete. As per the direction of Engineer incharge. (P.No.27, I.No.5.30 of PW, P&IWTD SR 2018-19) | | | | | | | | |
| | | Nos | | | | | | | |
| | Masidi Road upto Railway station | | 1 | 300.00 | | -- | 300.00 | | |
| | | | | | | | 300.00 | | |
| | | | | | | | 667.00 | 432.48 | 288464.16 |
| | Basic Rate Rs.= | 408.00 | | | | | | | |
| | Add 6% A.W Rs. = | 24.48 | | | | | | | |
| | **Total Rate Rs. =** | **432.48** | | | | | | | |

| Sl No | Description of work | Unit | No | Length m | Breadth m | Depth m | Quantity | Rate in Rs | Amount in Rs |
|---|---|---|---|---|---|---|---|---|---|
| 9 | Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8 Specification No. KSRRB M800-6 (P.No.180, I.No.24.1 of PW, P&IWTD SR 2018-19) | | | | | | | | |
| | | Sqm | | | | | | | |
| | Masidi Road upto Railway station | | 1 | 300.00 | | 0.35 | 105.00 | | |
| | | | | | | | **105.00** | 84.80 | **8904.00** |
| | Basic Rate Rs.= | 80.00 | | | | | | | |
| | Add 6% A.W Rs. = | 4.80 | | | | | | | |
| | **Total Rate Rs. =** | **84.80** | | | | | | | |
| 10 | Construction of granular sub-base Grading-V as Sub-base and drainage layer by providing coarse graded crushed stone aggregates of granite/ trap/basalt material, mixing in a mechanical mix plant at OMC, Carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98 % proctor density, complete as per specifications Clause 401 of MORTH V Revision.( I No-20.5,P No-153) | | | | | | | | |
| | **For Asphalt Road, Bad Reach** | Cum | | | | | | | |
| | **Besthara Beedhi** | | | | | | | | |
| | | | 1 | 60.00 | 1.20 | 0.15 | 10.80 | | |
| | | | 1 | 113.00 | 1.20 | 0.15 | 20.34 | | |
| | | | 1 | 43.00 | 1.20 | 0.15 | 7.74 | | |
| | Vijaya Jyothi School Road | | 1 | 224.00 | 1.20 | 0.10 | 26.88 | | |
| | | | | | | | **65.76** | 1994.92 | **131185.94** |
| | Basic Rate Rs.= | 1882.00 | | | | | | | |
| | Add 6% A.W Rs. = | 112.92 | | | | | | | |
| | **Total Rate Rs. =** | **1994.92** | | | | | | | |
| 11 | KSRRB M400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications(P.No-155,I No-20.18) | | | | | | | | |
| | **For Asphalt Road, Bad Reach** | Cum | | | | | | | |
| | **Besthara Beedhi** | | | | | | | | |
| | | | 1 | 60.00 | 1.20 | 0.230 | 16.56 | | |
| | | | 1 | 113.00 | 1.20 | 0.230 | 31.19 | | |
| | | | 1 | 43.00 | 1.20 | 0.230 | 11.87 | | |
| | Vijaya Jyothi School Road | | 1 | 224.00 | 1.20 | 0.230 | 61.82 | | |
| | | | | | | | **121.44** | 2001.28 | **243035.44** |
| | Basic Rate Rs.= | 1888.00 | | | | | | | |
| | Add 6% A.W Rs. = | 113.28 | | | | | | | |
| | **Total Rate Rs. =** | **2001.28** | | | | | | | |
| 12 | KSRRB M500-6. Providing and applying primer coat with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications Clause 502 of MORTH V revision(P.No-158,I No-21.6) | | | | | | | | |
| | **For Asphalt Road, Bad Reach** | Sqm | | | | | | | |
| | **Besthara Beedhi** | | | | | | | | |
| | | | 1 | 60.00 | 1.20 | | 72.00 | | |
| | | | 1 | 113.00 | 1.20 | | 135.60 | | |
| | | | 1 | 43.00 | 1.20 | | 51.60 | | |
| | Vijaya Jyothi School Road | | 1 | 224.00 | 1.20 | | 268.80 | | |
| | | | | | | | **528.00** | 28.62 | **15111.36** |
| | Basic Rate Rs.= | 27.00 | | | | | | | |
| | Add 6% A.W Rs. = | 1.62 | | | | | | | |
| | **Total Rate Rs. =** | **28.62** | | | | | | | |

| Sl No | Description of work | Unit | No | Length m | Breadth m | Depth m | Quantity | Rate in Rs | Amount in Rs |
|---|---|---|---|---|---|---|---|---|---|
| 13 | KSRRB M500-17. Providing and laying dense graded bituminous macadam using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications Clause 505 of MORTH V revisionusing 40/60 TPH capacity H.M.P. with Mechanical paver Gr-II (50 mm to 75 mm) with 4.5 % VG-30 Bitumen (P.No-160,I No-21.17.6) | | | | | | | | |
| | **For Asphalt Road, Bad Reach** | Cum | | | | | | | |
| | **Besthara Beedhi** | | | | | | | | |
| | | | 1 | 60.00 | 1.20 | 0.05 | 3.60 | | |
| | | | 1 | 113.00 | 1.20 | 0.05 | 6.78 | | |
| | | | 1 | 43.00 | 1.20 | 0.05 | 2.58 | | |
| | Vijaya Jyothi School Road | | 1 | 224.00 | 1.20 | 0.05 | 13.44 | | |
| | | | | | | | **26.40** | 6597.44 | **174172.42** |
| | Basic Rate Rs.= | 6224.00 | | | | | | | |
| | Add 6% A.W Rs. = | 373.44 | | | | | | | |
| | **Total Rate Rs. =** | **6597.44** | | | | | | | |
| 14 | KSRRB 500-7. Providing and applying tack coat using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM complete as per specifications (P.No-161,I No-21.7) | | | | | | | | |
| | **For Asphalt Road** | Sqm | | | | | | | |
| | **Besthara Beedhi** | | | | | | | | |
| | | | 1 | 60.00 | 6.00 | | 360.00 | | |
| | | | 1 | 113.00 | 4.50 | | 508.50 | | |
| | | | 1 | 43.00 | 5.30 | | 227.90 | | |
| | Vijaya Jyothi School Road | | 1 | 224.00 | 5.00 | | 1120.00 | | |
| | | | | | | | **2216.40** | 12.72 | **28192.61** |
| | Basic Rate Rs.= | 12.00 | | | | | | | |
| | Add 6% A.W Rs. = | 0.72 | | | | | | | |
| | **Total Rate Rs. =** | **12.72** | | | | | | | |
| 15 | Providing and laying bituminous concrete 40mm thick with hot mix plant, using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications. Clause 507 of MORTH V revision as per IRC SP-53-2015. using 40-60 TPH capacity HMP with mechanical paver grading II (30-45mm) with 5.4 % of modified bituminus binder consisting of 4.97% of VG-30 bitumen (60/70 grade) and 0.43% of plastomeric thermoplastics (waste plastic)(P.No-171,I No-21.78.12) | | | | | | | | |
| | **For Asphalt Road** | Cum | | | | | | | |
| | **Besthara Beedhi** | | | | | | | | |
| | | | 1 | 60.00 | 6.00 | 0.04 | 14.40 | | |
| | | | 1 | 113.00 | 4.50 | 0.04 | 20.34 | | |
| | | | 1 | 43.00 | 5.30 | 0.04 | 9.12 | | |
| | Vijaya Jyothi School Road | | 1 | 224.00 | 5.00 | 0.04 | 44.80 | | |
| | | | | | | | **88.66** | 7753.90 | **687429.76** |
| | Basic Rate Rs.= | 7315.00 | | | | | | | |
| | Add 6% A.W Rs. = | 438.90 | | | | | | | |
| | **Total Rate Rs. =** | **7753.90** | | | | | | | |
| 16 | KSRRB M800-13.Road Marking with Hot Applied Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface/ Concrete Surface: Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 standards specified. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803(P.No-182,I No-24.15) | | | | | | | | |
| | **For Asphalt Road** | Sqm | | | | | | | |
| | **Besthara Beedhi** | | | | | | | | |
| | | | 2 | 60.00 | 0.10 | | 12.00 | | |
| | | | 2 | 113.00 | 0.10 | | 22.60 | | |

| Sl No | Description of work | Unit | No | Length m | Breadth m | Depth m | Quantity | Rate in Rs | Amount in Rs |
|---|---|---|---|---|---|---|---|---|---|
| | Vijaya Jyothi School Road | | 2 | 43.00 | 0.10 | | 8.60 | | |
| | | | 2 | 224.00 | 0.10 | | 44.80 | | |
| | Basic Rate Rs.= | 429.00 | | | | | 88.00 | 454.74 | 40017.12 |
| | Add 6% A.W Rs. = | 25.74 | | | | | | | |
| | **Total Rate Rs. =** | **454.74** | | | | | | | |
| | Add GST @ 12% | | | | | | | Sub Total 1 Rs. | 2677417.24 |
| | | | | | | | | | 321290.07 |
| | Miscellaneous & Rounding off | | | | | | | Sub Total 2 Rs. | 2998707.31 |
| | | | | | | | | | 1292.69 |
| | **CERTIFICATE:** | | | | | | | Total Rs. | 3000000.00 |

1 The work spot has been inspected by me and the work is found to be necessary.
2 The estimate is prepared as per PW, P&IWTD S.R Bangalore circle for the year 2018-2019.
3 The Provisions made in the estimate are quite necessary and adequate.
4 The area comes with in the BBMP limits.

Assistant Engineer
Ward 02
BBMP

Assistant Executive Engineer
Yelahanka Sub Division
BBMP

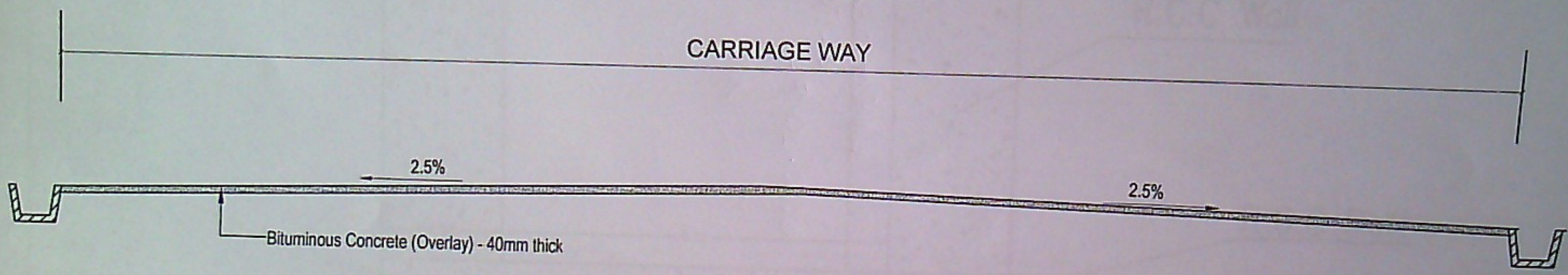
Executive Engineer
Yelahanka Division
BBMP

**Administrative Approval**
Accorded For Rs.30.00lakh
Head of A/C P-3726
CER NO :180 Dt:27.03.2020

AA ACE (NK)

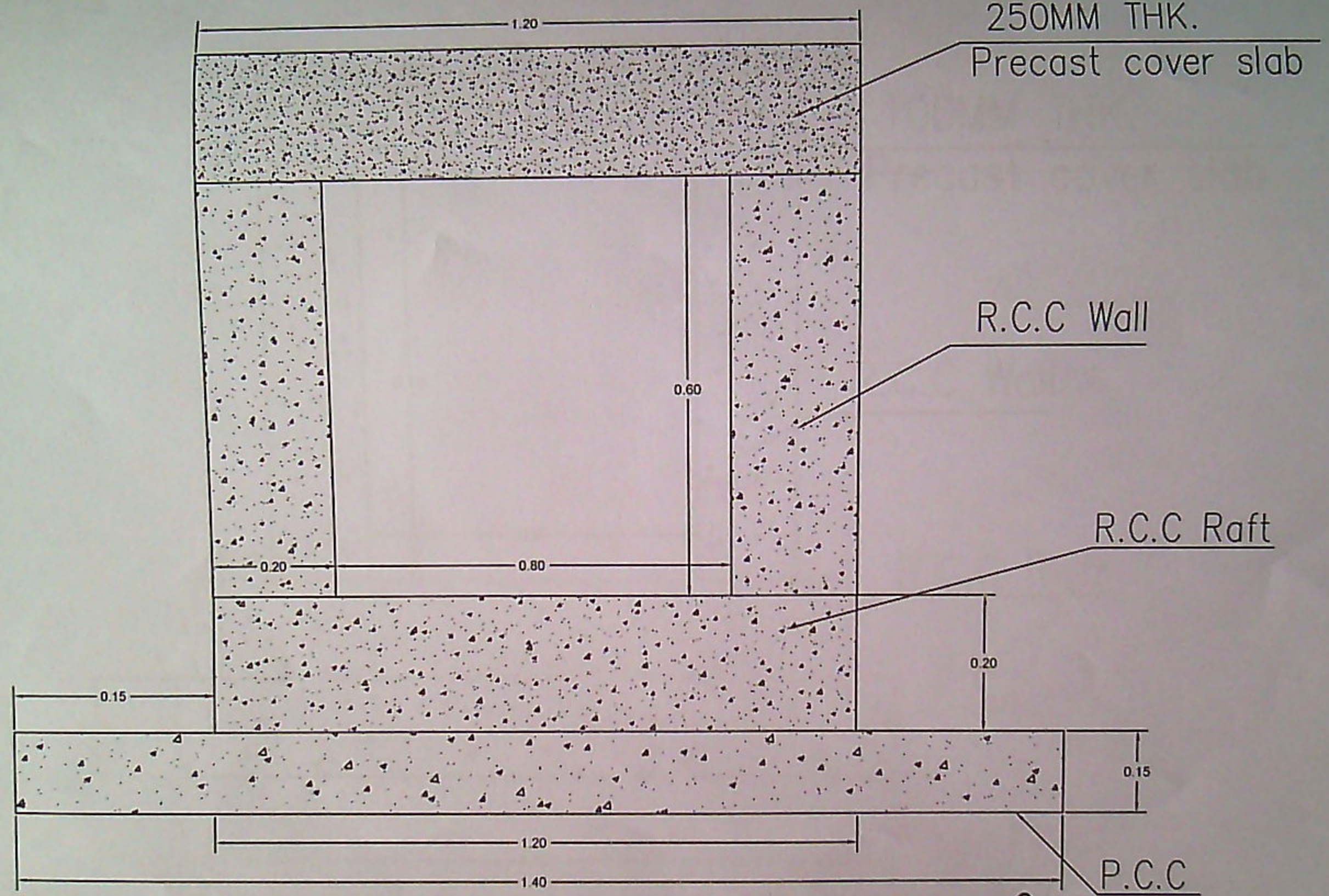
**Technical Sanction**
Accorded For Rs.30.00lakh
Head of A/C P-3726
CER NO :338 Dt:27.03.202

TA ACE (NK)

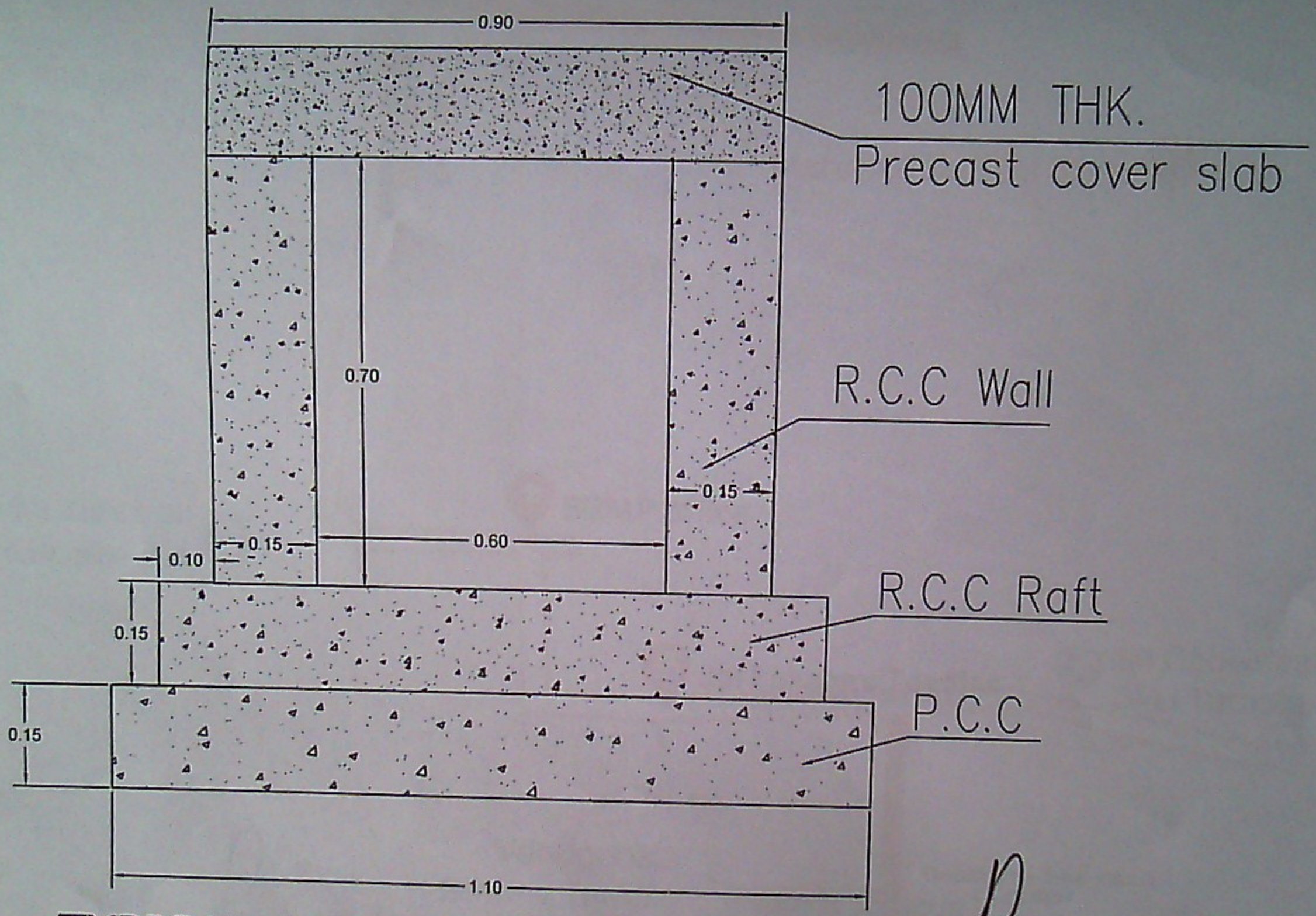



Proposed typical Cross section of Asphalt Road Overlay

AE-02




TYPICAL CROSS SECTION OF CULVERT




TYPICAL CROSS SECTION OF DRAIN

AE-02

Emmanual Full Gospel Church

Vijaya jyothi school L-224m

5th cross L-100m

Maruthi Medical Store

Yelahanka Junction
ಯಲಹಂಕ ಜಂ.

BBMP office

Jai Lakshmi Textiles

MASIDI ROAD

Sri Chowdeshwari Devi Temple...

Tank Bund Rd

Venugopala Swamy Temple
ವೇಣುಗೋಪಾಲ ಸ್ವಾಮಿ...

Yelahanka Railway

Besthara bidi road L-216m

Matrix Abacus - Yelahanka Old Town

Shri Nagarajaswamy Temple

| | | | | | |
|---|---|---|---|---|---|
| CLIENT: BRUHAT BANGALORE MAHANAGARA PALIKE | CONSULTANT:- Silicon Consulting Engineers #51317, 4th CROSS BEL 2nd STAGE BHARATH NAGAR BANGALORE 560 091 E-mail siliconcivilengineers@gmail.com | Assitante Engineer | Assitante Executive Engineer | Executive Engineer | Improvements to roads and drains at Besthara Beedhi in Chowdeshwari ward no 02 of Yelahanka sub Division. Dwg No: Date Rev: R0 |